DEFINITIONS

Task 1

1. The Mars mission was originally funded to last 90 sols and to end last April.
2. MSL is scheduled to be launched on September 15, 2009.
3. The rover can perform all planned operations under solar panel power alone.
4. The Mars rover will seek samples that have minerals deposited by water-related processes.
5. The space mission will carry more advanced scientific instruments than any other mission ever sent to Mars.

Task 2

a) An mp3 player is used when playing mp3 files.

b) A media player is used to store, transfer, and play back digital media.

c) A media player is a device which can be used to store, transfer, and play back digital media, such as mp3 files and various video clips.

d) A media player is an electronic device. It can be used to store, transfer, and play back digital media. For example, it can be used to play mp3 files and various video clips.

e) The media player is the device that can be used in storing, transferring, and playing back digital media, such as mp3 files and various video clips.

Task 3

approach	**compound**	**field**	**mechanism**	**procedure**	**technology**
component	**device**	**tool**	**method**	**process**	**measure**

1. **A machine** is any _____ that uses energy to perform some activity.
2. **Water distillation is** _____ in which volatile gases are removed in a degasification chamber.
3. **Body mass index** (BMI) **is** _____ **of** body fat based on height and weight that applies to both adult men and women.
4. **Methane** is a chemical _____ with the molecular formula CH_4.

Extended definitions

Here is a list of useful methods for amplifying your extended definition:

1. **Analysis of parts**	(*What are its parts?)*
2. **Operating principle**	(*How does it work?)*
3. **Applications/examples**	(*How is it used or applied?)*
4. **Analogy / Comparison**	*(Is it similar to something already familiar?)*
5. **History**	(*What is its origin and background?)*
6. **Advantages/disadvantages**	
7. **Requirements**	(*Materials or conditions needed to make it work?)*
8. **Physical appearance/ features**	(*What does it look like? What are its characteristic features?*

Task 4

A The term **RADAR** was coined in 1941 as an acronym for **R**adio **D**etection **a**nd **R**anging. The term has since entered the English language as a standard word, *radar*, losing the capitalization. Radar was originally called RDF (Radio Direction Finder) in the United Kingdom.

B The technique of **holography** can also be used to optically store, retrieve, and process information. While holography is commonly used to display static 3-D pictures, it is not yet possible to generate arbitrary scenes by a holographic volumetric display.

C A **fuel cell** is an electrochemical conversion device. [2]It produces electricity from fuel (on the anode side) and an oxidant (on the cathode side), which react in the presence of an electrolyte. [3]The reactants flow into the cell, and the reaction products flow out of it, while the electrolyte remains within it. [4]Fuel cells can operate virtually continuously as long as the necessary flows are maintained.

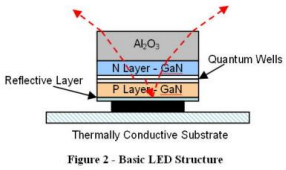

Figure 2 - Basic LED Structure

D **Fuel cells** differ from electrochemical cell batteries in that they consume reactant, which must be replenished, whereas batteries store electrical energy chemically in a closed system. Additionally, while the electrodes within a battery react and change as a battery is charged or discharged, a fuel cell's electrodes are catalytic and relatively stable.

E A **lighter** is a portable device used to create a flame. [2]It consists of a metal or plastic container filled with lighter fluid (usually naphtha or liquid butane under pressure), as well as a means of ignition and some provision for extinguishing the flame, by depriving it of either air or fuel.

F **LEDs** are widely used as indicator lights on electronic devices and increasingly in higher power applications such as flashlights and area lighting. [4] In addition to lighting, interesting applications include using UV-LEDs for sterilization of water and disinfection of devices,[4] and as a grow light to enhance photosynthesis in plants.[5]

Task 5 Extended definition

[1] **A 3D scanner** is a device that analyses a real-world object or environment to collect data on its shape and possibly its appearance (e.g. colour) which can be used to construct digital three-dimensional models. [2] Many different technologies can be used to build these 3D-scanning devices; however, each technology comes with its own limitations, advantages and costs. [3] Many limitations in the kind of objects that can be digitised are still present; for example, optical technologies encounter many difficulties with shiny, mirroring or transparent objects. [4]The collected 3D data is useful for a wide variety of applications. [5] These devices are used extensively by the entertainment industry in the production of movies and video games. [6] Other common applications of this technology include industrial design, orthotics and prosthetics, reverse engineering and prototyping, quality control/inspection and documentation of cultural artefacts. [7] The purpose of a 3D scanner is usually to create a point cloud of geometric samples on the surface of the subject. [8] These points can then be used to extrapolate the shape of the subject (a process called reconstruction). [9] If colour information is collected at each point, it is also possible to determine the colours on the surface of the subject . [10] 3D scanners share several traits with cameras. [11] Similarly to cameras, they have a cone-like field of view, and they can only collect information about surfaces that are not obscured. [12] While a camera collects colour information about surfaces within its field of view, a 3D scanner collects distance information about surfaces within its field of view. [13] The "picture" produced by a 3D scanner describes the distance to a surface at each point in the picture. [14]This allows the three dimensional position of each point in the picture to be identified.

Adapted from 3D scanner. Wikipedia. Available at https://en.wikipedia.org/wiki/3D_scanner.

DEFINING VS NON-DEFINING RELATIVE CLAUSES

Task 6

Match the best **meaning (a/b or c/d)** to each of the sentences below.

1. ____ All the employees**, who failed to come to work today,** will be fired.

2. ____ All the employees **who failed to come to work today** will be fired.

3. ____ All the employees **failing to come to work today** will be fired.

a) Those of you who stayed on the job today will get a special bonus for your loyalty to the company.

b) The whole factory went on an illegal strike today, and you must all face the consequences.

Match the best **meaning (a / b or c / d)** to each of the sentences below.

4. ____ The university servers **which crashed on Saturday evening** will be replaced with newer models.

5. ____ The university servers**, which crashed on Saturday evening,** will be replaced with newer models.

6. ____ The university servers **that crashed on Saturday evening** will be replaced with newer models.

7. ____ The university servers**, that crashed on Saturday evening,** will be replaced with newer models.

8. ____ The university servers **crashing on Saturday evening** will be replaced with newer models.

c) All of the servers crashed, so we will need to replace all of them.

d) Only a couple of servers actually went down, so we will not need to replace too many.